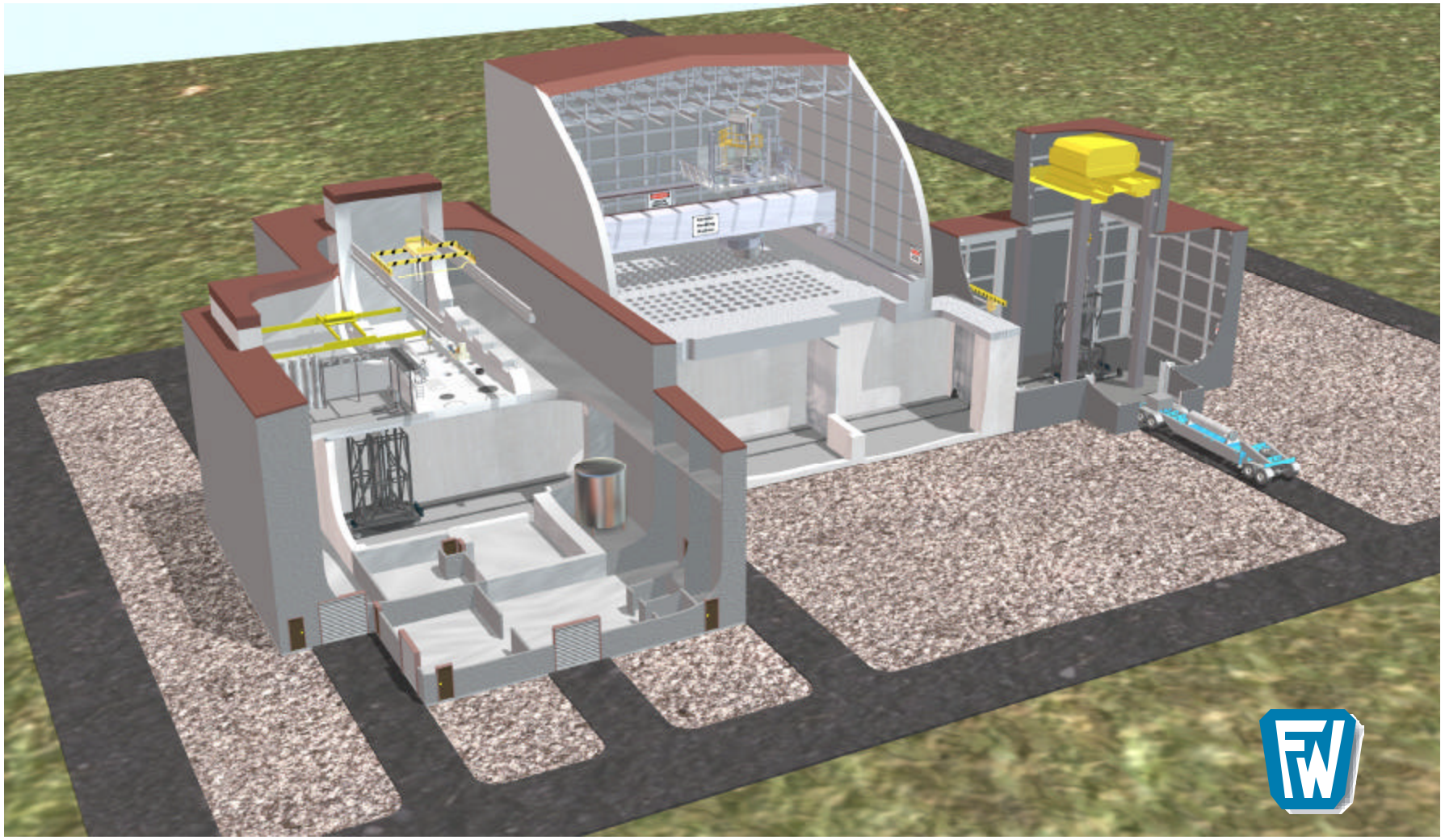


Foster Wheeler Environmental Corporation
Idaho Spent Fuel (ISF) Facility
Presentation to NRC - October 2, 2002
Docket No. 72-25

FWENC Introduction

Ron Izatt

ISF Project Manager

FWENC Attendees

Ron Izatt	Project Manager
Randy Roberts	Deputy Project Manager
Jim Saldarini	Licensing Manager
Phil Bartley	ES&H Manager
Dan Howard	RIO Technical Services

DOE-Idaho Attendees

Jan Hagers	ISF Project Manager (Acting) TMI-2/FSV Licensing Manager
Roger Twitchell	NEPA Compliance Officer

Meeting Agenda

8:45 am - 9:00 am	NRC Introduction/Opening Remarks
9:00 am - 9:20 am	Meeting Objectives
	FWENC Organization/DOE Interface
9:20 am - 9:40 am	Licensing Overview
	Licensing Milestone Schedule
9:40 am - 10:00 am	Site Description
10:00 am - 10:15 am	BREAK
10:15 am - 11:00 am	Facility Description
	Key Characteristics
	Facility Animation
11:00 am - 11:30 am	INEEL Facilities Overview
11:30 am - 12:00 pm	Question and Answer Session
	Adjourn

Objectives of Meeting

Familiarize the NRC/CNWRA Environmental Reviewers with the FWENC License Application for the Proposed Idaho Spent Fuel Facility ISFSI at INEEL

Project Origin

Settlement Agreement

The State of Idaho, the Department of Energy, and the Department of the Navy agreed on October 16, 1995, to terms and conditions to fully resolve all issues in the actions Public Service Co. of Colorado v. Batt, No. CV 91-0035-S-EJL and United States v. Batt, No. CV-91-0065-S-EJL

Terms of Settlement Agreement

- All Spent Nuclear Fuel (SNF) at INEEL Must be Transferred Out of Current Wet Storage by December 31, 2023
- DOE to Request Funds for FY 1998 for Design and Construction of a Dry Storage Facility to Replace Wet, Below Ground Facilities
- All SNF Must be Removed from Idaho by January 1, 2035 -- Due to quantity of SNF at INEEL, transfer out of Idaho must begin years in advance

INEEL SNF Storage Condition

- Most SNF at INEEL Originally Destined for Reprocessing -- Stored Under Conditions Acceptable for Short-Term Storage Only
- Current SNF Storage at INEEL is in Aging Above-Ground Facilities, a Storage Pool and Underground Storage
  - Corrosion of SNF in wet storage has been detected
  - Underwater storage is of concern to Idaho due to location over Snake River Plain Aquifer
  - Corrosion of some SNF canisters in underground dry storage has been observed

Role of Idaho Spent Fuel Facility

- Move SNF to Reliable, NRC Licensed, Interim Dry Storage Facility
- Repackage SNF into Canisters Compatible with Eventual Disposal at a Geologic Repository
- Provides Capability to Load Packaged SNF into Casks for Transportation to a Geologic Repository

DOE Privatized Project

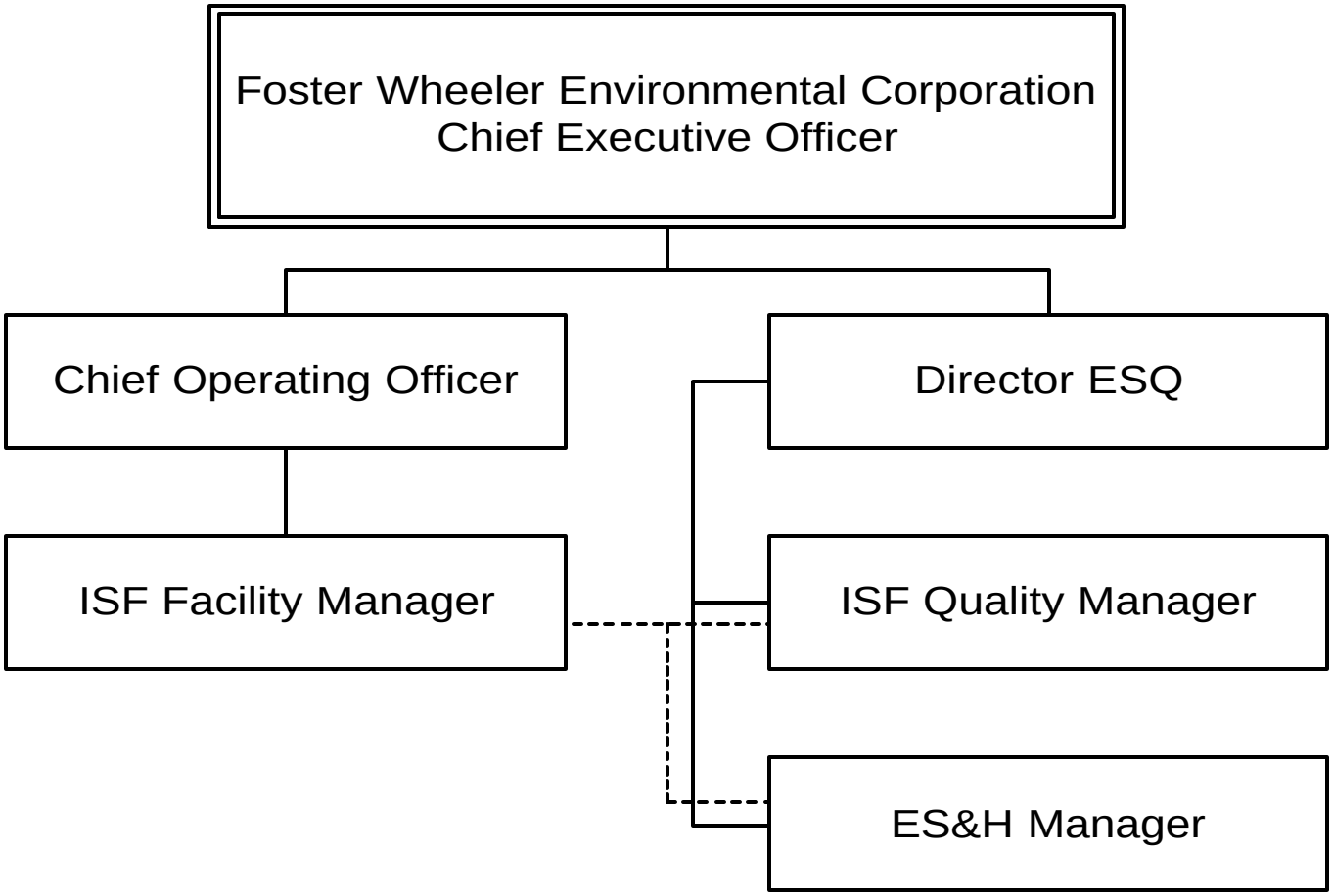
FWENC's Roles

- Facility Owner
  - Land withdrawn from public domain
- Designer
- Licensee
- Constructor
- Operator

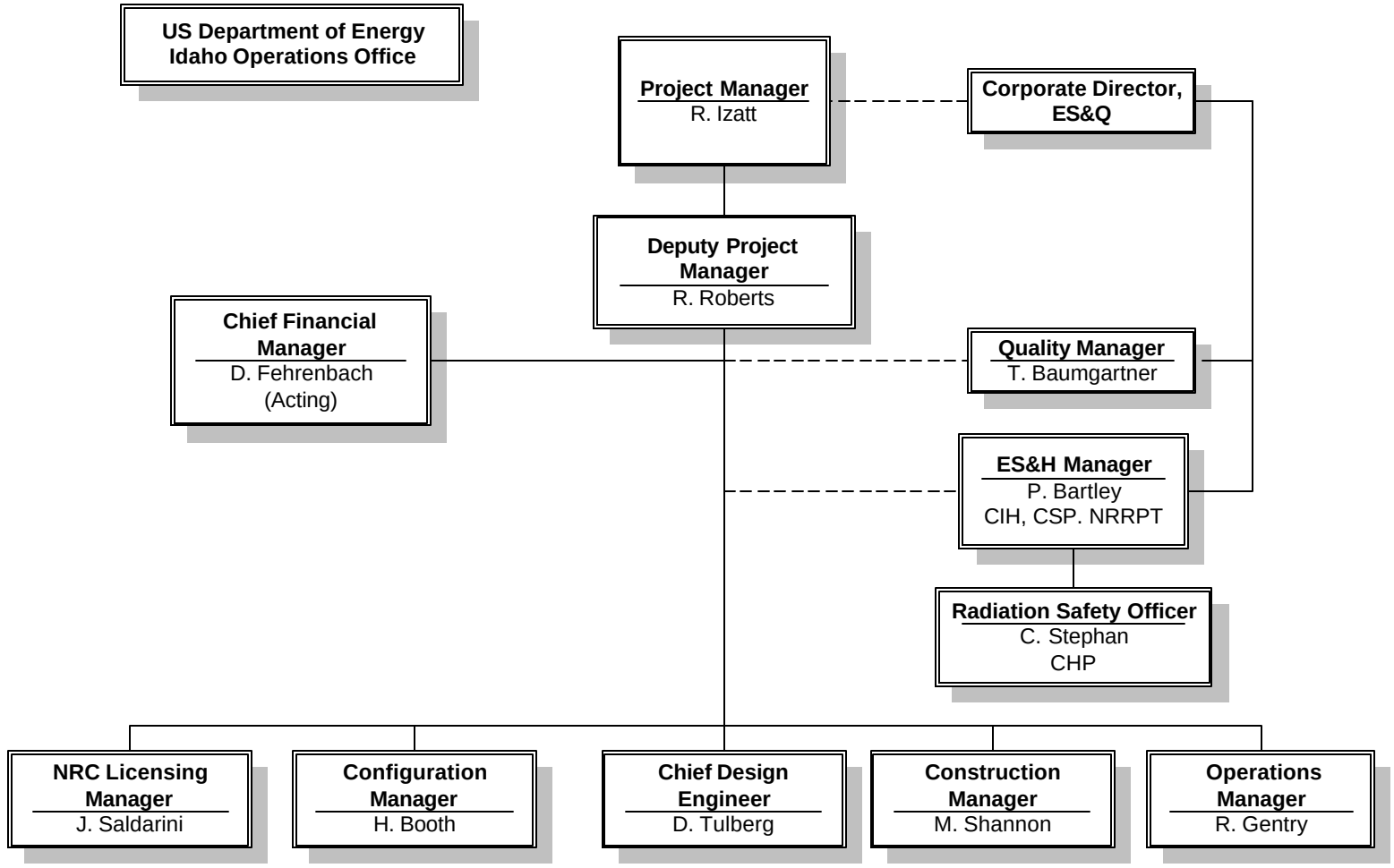
DOE-Idaho's Roles

- Customer/SNF Owner
- SNF Transport to Facility
- D&D Responsibility
- Indemnification

FWENC Corporation Organization



ISF Project Organization



FWENC Project Team

FOSTER WHEELER

ALSTEC systems technology

UTILITY ENGINEERING

RWE Solutions
RWE NUKEM Ltd

R10 TECHNICAL SERVICES, INC.

Winston & Strawn

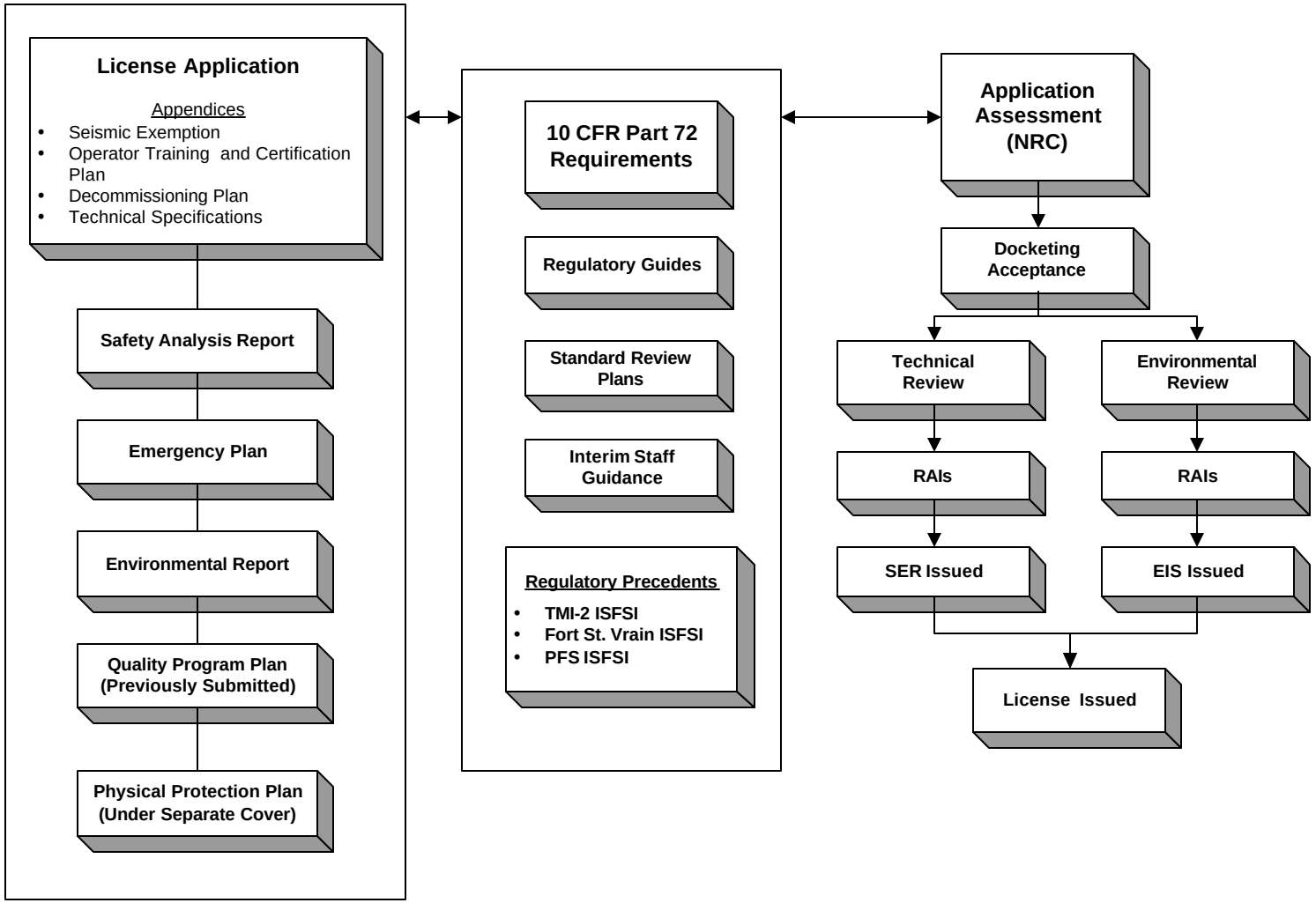
- 22 Privatization Projects - $4 Billion. Constructed Fort St. Vrain ISFSI
- 3 ISFSIs - Over 300,000 Fuel Elements Stored. Designed Fort St. Vrain ISFSI
- Previous Fort St. Vrain ISFSI Operator (via PSC) - 1,482 Fuel Elements Processed and Stored
- Designs, Builds, and Operates Fuel Handling Facilities
- Experienced in Part 50, 71 and 72 Licenses
- Regulatory and Legal Support to Numerous Licensees

Licensing Overview

Jim Saldarini

Licensing Manager

License Application Roadmap



Licensing Schedule for the ISF Facility

Milestones	Dates	Status
FWENC Application	11/19/01	Submitted
NRC Acceptance Review	03/14/02	Completed
Environmental Acceptance Review	05/30/02	Completed
Environmental Review Site Visit	07/31/02	Completed
Environmental Review Meeting	10/02/02	In progress
NRC Issues Round 1 RAIs	10/25/02	Target
FWENC Responds to Round 1 RAIs	01/24/03	Target
Draft EIS Published	May 2003	Target
NRC Issues Round 2 RAIs	05/30/03	Target
FWENC Responds to Round 2 RAIs	08/29/03	Target
Final EIS Published	Dec 2003	Target
SER Published and License Issued	03/31/04	Target

Guidance Documents Used for ER

- No ISFSI Specific Guidance Document Available at the Time of Preparation of the ISF License Application*
- Utilized Guidance Documents for Other Types of Facilities to Define Content, Adapted as Appropriate for ISFSIs
  - RG 3.8, Preparation of ERs for Uranium Mills
  - RG 4.2, Preparation of ERs for Nuclear Power Stations
  - RG 4.9, Preparation of ERs for Commercial Uranium Enrichment Facilities
- NUREG-1555, Environmental Standard Review Plan
- Regulatory Guide 4.2 Used as Principal Format Guidance
  - Most extensive list of topics
  - Information requirements most applicable to an ISFSI Environmental Report

***** NUREG 1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, Draft Issued September 2001

ER Reference Documents

- TMI-2 ISFSI Environmental Report
- TMI-2 ISFSI Safety Analysis Report
- TMI-2 ISFSI FEIS
- DOE Programmatic SNF Management and INEEL Environmental Restoration and Waste Management Programs FEIS
- DOE DEIS for High-Level Waste and Facilities Disposition at the INEEL

ER Supplemental Information

- Updated Population Density and Distribution Data Using 2000 Census Data
- Reviewed and Updated Meteorological Data
  - Ambient temperatures and precipitation
- Updated INEEL Workforce Population
  - Data from DOE Public Affairs Office
- Sponsored Ecological Evaluation of the Local Site
  - Performed by Stoller Corporation, DOE contractor for environmental monitoring at INEEL (See ER Appendix A)
- Conducted Local Site Review of Potential Impacts on Cultural Resources
  - Performed by DOE Cultural Resources Group (see ER Appendix B)

Related Environmental Impact Statements

- DOE Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement - DOE/EIS-0203-F, April 1995
- NUREG-1626 – Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation to Store the Three Mile Island Unit 2 Spent Fuel at the Idaho National Engineering and Environmental Laboratory, March 1998
- Idaho High-Level Waste & Facilities Disposition Draft Environmental Impact Statement, DOE/EIS-0287D, December 1999 (NOTE: FEIS currently in publication -- NRC and CNWRA on distribution)

Environmental Overview

- INEEL Site has been the Subject of Extensive Previous Environmental Evaluations
- ISF Facility will be Constructed within the INEEL Site Directly Adjacent to the INTEC Facility, in which Resides the Existing TMI-2 ISFSI
- TMI-2 ISFSI is DOE Owned, was Licensed by the NRC in 1999, and Operated by DOE's M&O Contractor
- ISF ISFSI Addressed Generically in DOE Programmatic SNF Management and INEEL Environmental Restoration and Waste Management Programs FEIS

Environmental Overview (cont'd)

- Previous Environmental Assessments have Concluded Spent Fuel Management and Storage Activities such as the ISF Facility can be Constructed and Operated within the INEEL without Significant or Undue Adverse Impact on the Environment
- ISF Environmental Report Represents a Compilation of Previously Published Data, Updated, as Appropriate, to Reflect Current Information and to Address Unique and Specific Features and Potential Environmental Impacts of the Construction and Operation of the ISF Facility

ISF Facility Site Description

Phil Bartley

ES&H Manager

ISF Site Characteristics

- Located within INEEL -- 890 Square Miles of High Desert Ecosystem Dominated by Shrub-Steppe Vegetation
  - Used for Nuclear Research/SNF Storage for over 50 Years
- Remote from Populated Areas
- Vacant/Unused Area, Adjacent to Existing DOE Facility (INTEC)
- No Endangered Plants or Animal Species
  - ISF Site provides no habitat value

INEEL Site Map

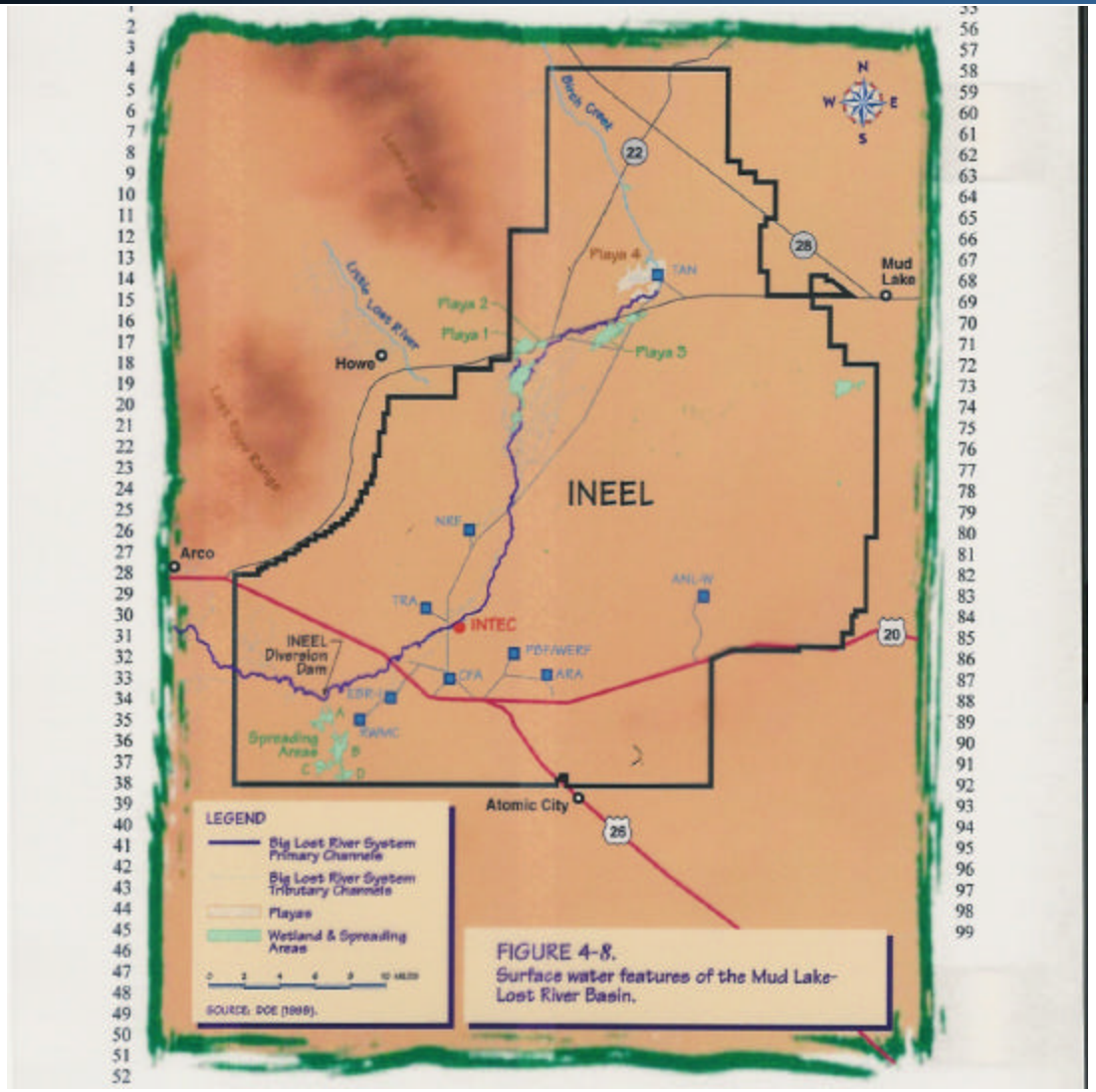
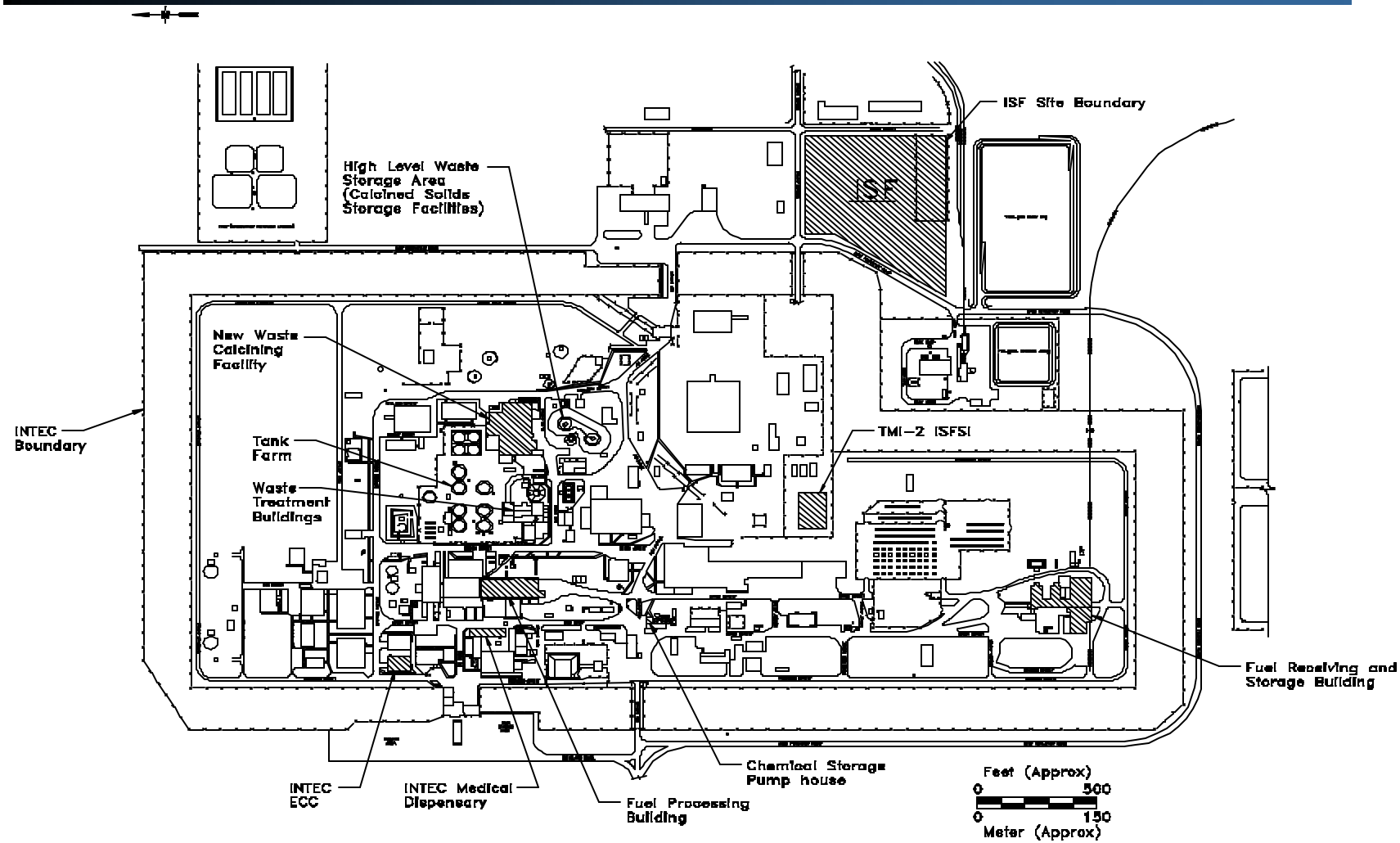


FIGURE 4-8.
Surface water features of the Mud Lake-Lost River Basin.

INTEC Area Plot and Location of ISF Site

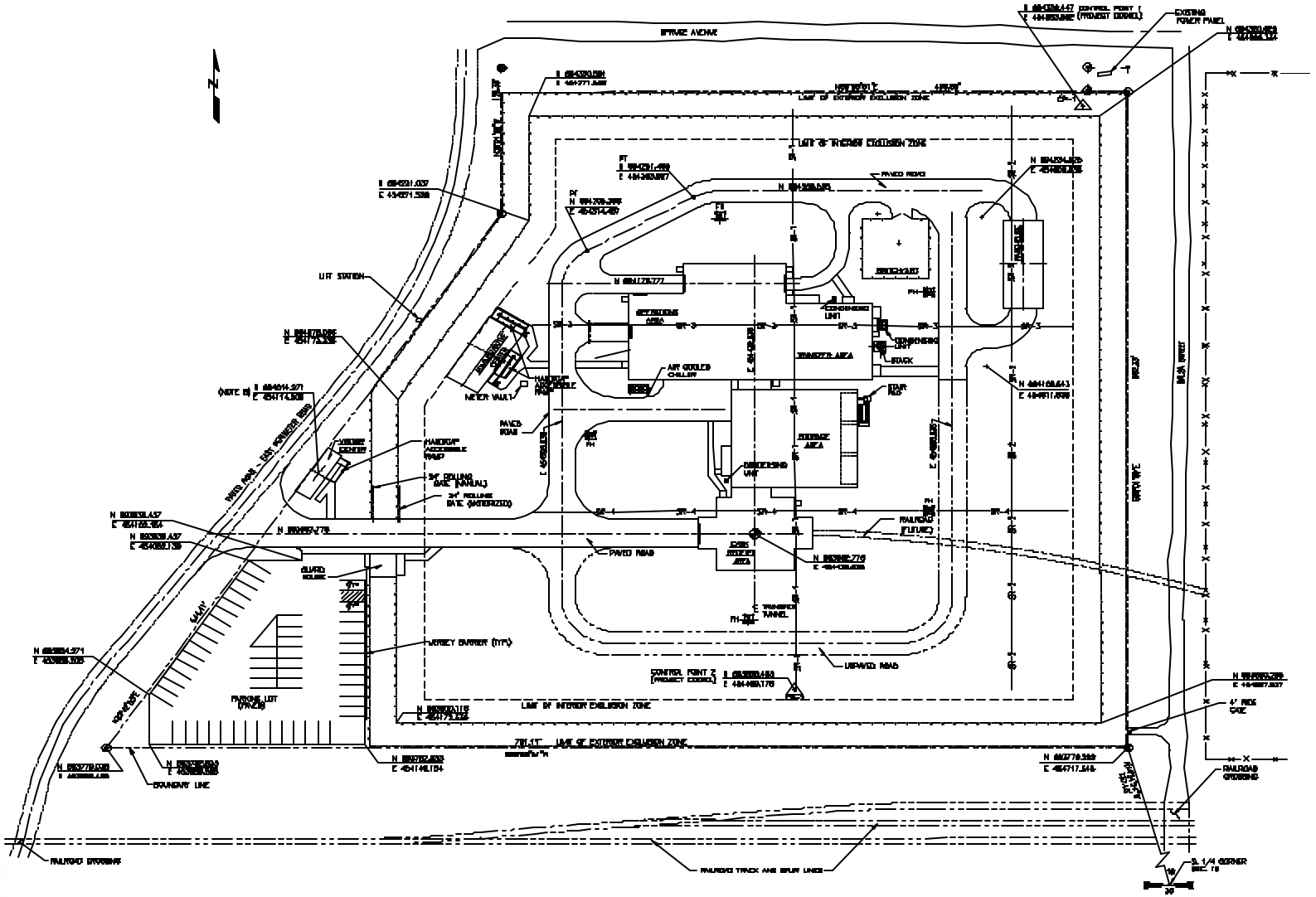


Proposed ISF Facility Site

TMI-2/ISF Facility Relationship

- Physical Location Relative to TMI-2 ISFSI
  - Both facilities on INEEL Site
  - TMI-2 located within Idaho Nuclear Technology and Engineering Center (INTEC) perimeter
  - ISF Site located immediately adjacent to INTEC perimeter
  - Approximately 500 yards apart
- DOE-ID Shared Resources
  - Physical protection
  - Emergency planning and response
  - Controlled Area Boundary

ISF Facility Site Plan



Radioactive Waste

- Solid Radioactive Waste Returned to DOE
  - Expected to be low-level contact-handled radioactive waste
  - Primary waste surveyed in FPA before load out
  - Operations consist of size reduction and packaging
  - Disposal at INEEL in accordance with DOE requirements
- No Liquid Radiological Discharges to the Environment
  - Tanks provided to hold waste for mobile processing/off-site shipment
  - Volume minimized by decontamination procedures, approx. 5000 gal/yr
  - Contaminant concentrations expected to be on the order of 10 nCi/g
  - Off-site shipments per 49 CFR 173, expected once per year
- HEPA Filtration for Potentially Contaminated Effluents
  - Stack monitoring system per N13.1 1999
  - Anticipate < 1% NESHAP limit of 10 mrem/yr

Chemical Waste

- No Chemical Processing
- No Chemical Air or Liquid Discharges
  - Only emission source is back-up diesel, exempt source
- Very Small RCRA Quantities May be Generated
  - Primarily from characteristic waste

ISF Facility Overview

Randy Roberts

Deputy Project Manager

Fuel Types

- Peach Bottom Cores 1 and 2
  - 1,601.5 fuel elements
  - Operation terminated in 1974 (fuel cooled > 28 years)
- Shippingport LWBR
  - 15 reflector modules
  - 127 loose reflector rods
  - Operation terminated in 1983 (fuel cooled > 19 years)
- TRIGA
  - 1,600 fuel elements
  - Various domestic and foreign training/research reactors

Thermal Discharges

Low Heat Production Relative to Typical Commercial ISFSI due to Age/Type of SNF

	Typical Power Reactor Fuel Assembly*	ISF Canister Loaded with Fuel		
		TRIGA	Peach Bottom	Shippingport
Decay Heat	490 W	35 W	33 W	10 W

* PWR 10-years out of reactor

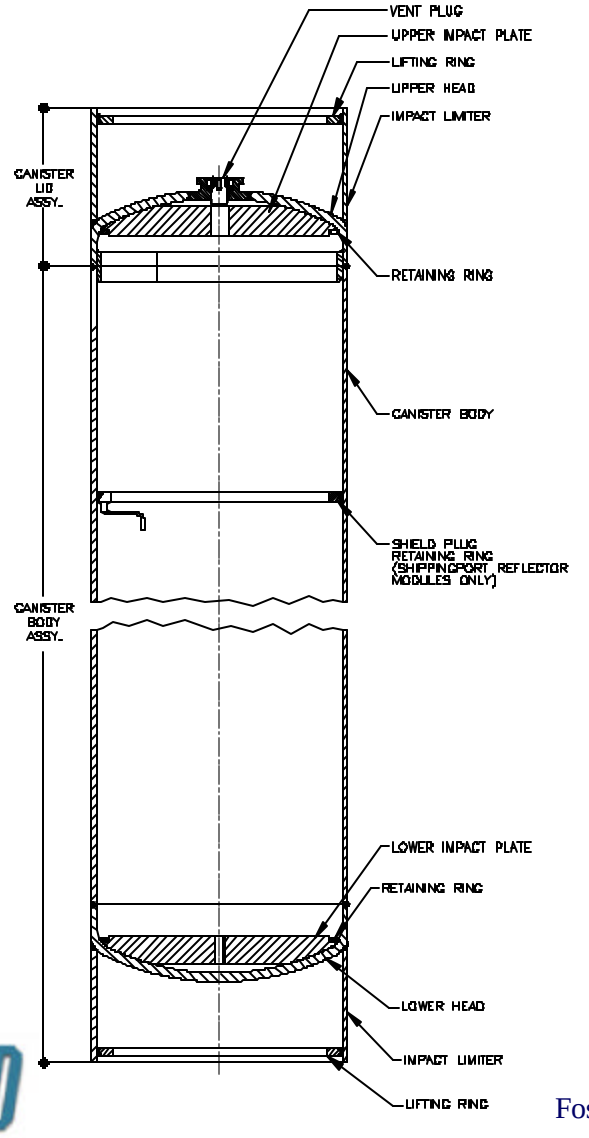
DOE Transfer Casks

- DOE Peach Bottom Casks (PB-1 and PB-2) will be used to:
  - Transfer SNF to ISF Facility
  - Transfer SNF within ISF Facility to Fuel Packaging Area
- Government Furnished Equipment, Operated and Maintained Under DOE-ID's Onsite Transportation Program
- PB-1 Originally Licensed Under 10 CFR Part 71 for Transport of Peach Bottom SNF to the INEEL Site

ISF Facility Design Objectives

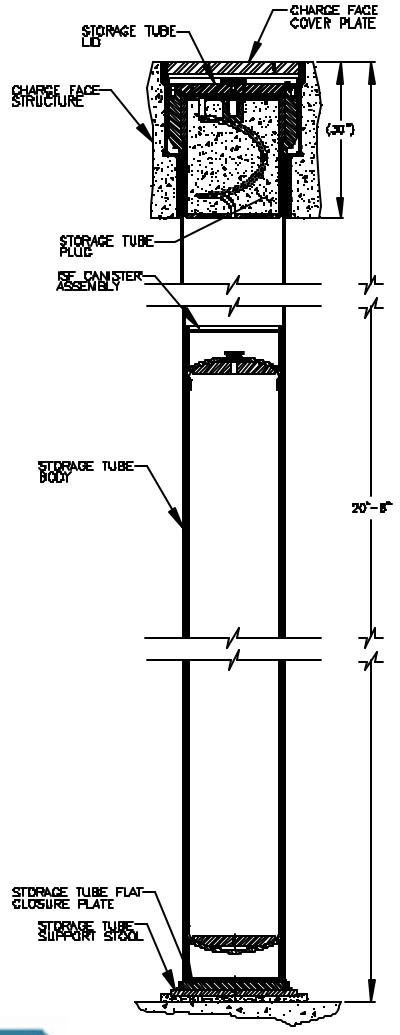
- Protect Public and Worker Health and Safety
  - Minimize consequences of design basis accidents
  - Provide recovery features for key equipment
  - Passive accident mitigation features
  - ALARA
- Minimize Effluents and Wastes
- Provide Double Confinement for SNF
- Use Demonstrated and Licensed Technologies

ISF Canister Design



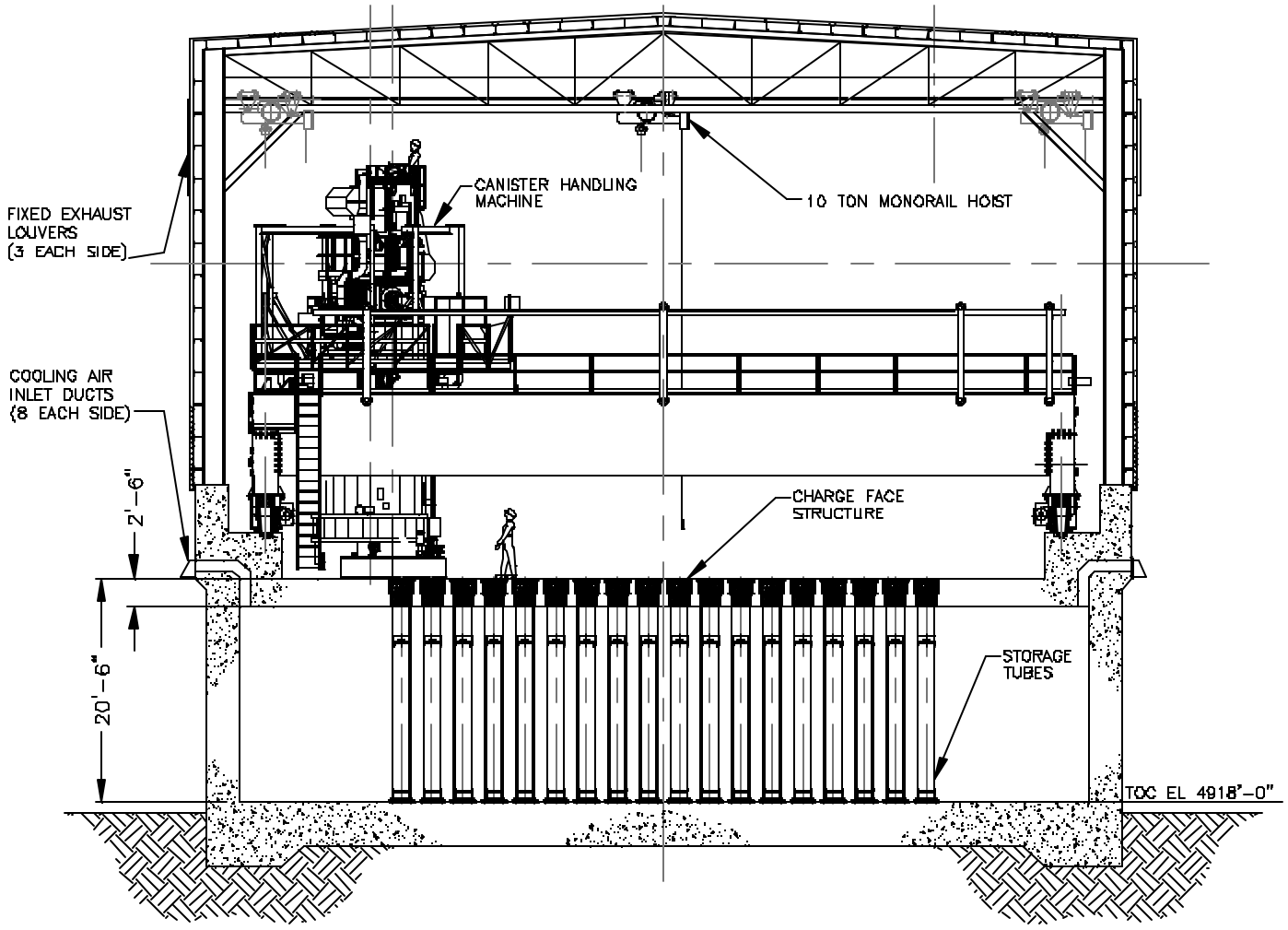
- Constructed of 316L Stainless Steel
- Full Penetration Lid Weld, Ultrasonic & Liquid Penetrant NDE
- Canister Lid Weld Leak Tested in Lieu of Pressure Test
- Vacuum Dried and Inerted
- Accommodates Internal Shield Plug

ISF Storage Tube Assembly

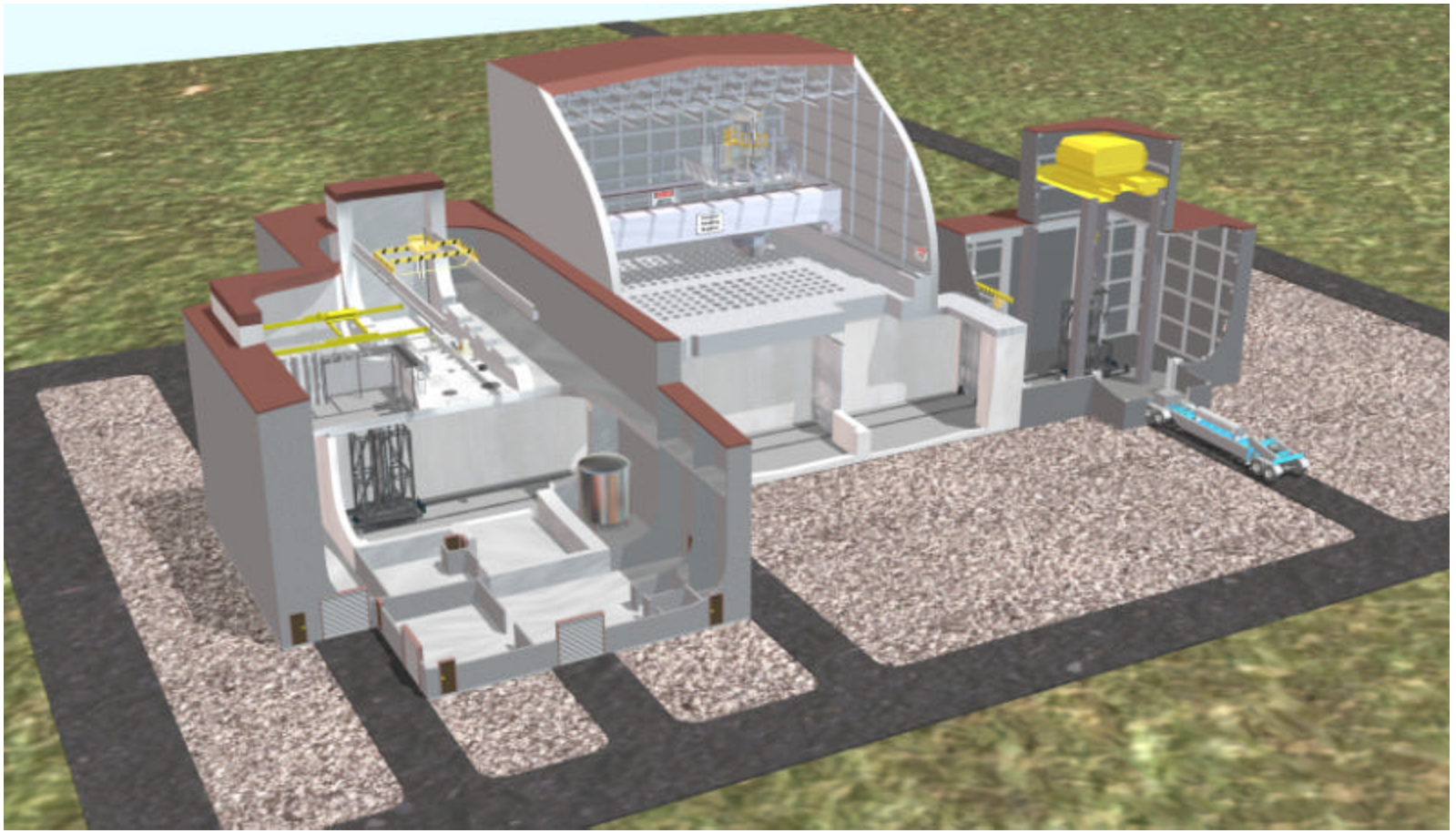


- Secondary Confinement Boundary
- Maintains Inert Storage Environment
- Storage Tube - ASME Section III, Division 1, Subsection NC

Storage Vault



Facility Operations Animation



INEEL Facilities Overview

Jan Hagers

DOE-Idaho

ISF Project Manager (Acting)

TMI-2/FSV Licensing Manager